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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,796	08/01/2001	Atsushi Tanaka	HITA-0073	4487

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EXAMINER

VITAL, PIERRE M

ART UNIT	PAPER NUMBER
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2188

DATE MAILED: 03/31/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/918,796

Applicant(s)

TANAKA ET AL.

Examiner

Pierre M. Vital

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 August 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement filed August 01, 2001 complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show a labeled representation of Figs 8-15 as described in the specification. It is not clear what these flowcharts steps represent in these Figures. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the manner of a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings and **MUST** be approved by the

examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-4, 6-7, 9-10 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Flynn, Jr. (US6,453,392).

As per claim 1, Flynn discloses a storage system wherein the system receives a command to which an ID number for identifying one of a plurality of OSs is attached *{i.e., each request includes a PGID and a VMID}* [col. 8, lines 51-57], derives said ID

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number *{i.e., the PGID/VMID is compared to a stored PGID/VMID}* [col. 8, lines 65-67], and returns a response that indicates whether to process or reject the access to a logical volume with said ID number attached thereto, depending on whether the logical volume is accessible for said command *{i.e., if PGIDs/VMIDs are not the same, access is denied}* [col. 9, lines 1-15].

As per claim 2, Flynn discloses said logical volume consists of a plurality of magnetic disk units *{i.e., DASDs}* [col. 6, lines 1-3].

As per claims 3 and 9, Flynn discloses the priority of processing for access may change according to the OS's ID number attached to said command received *{i.e., exclusive access will not be granted based on PGID and VMID comparison}* [col. 8, line 47-col. 9, line15].

As per claims 4 and 10, Flynn discloses whether to process or reject the access requested by said command received is determined, based on preset conditions and said response is returned *{i.e., if PGIDs/VMIDs are not the same, access is denied; if same, access is granted}* [col. 8, line 65-col. 9, line15].

As per claim 6, Flynn discloses the system returns the response which is determined depending on combination of a plurality of types of ID numbers attached to said command received *{i.e., PGIDs and VMIDs are both compared}* [col. 9, lines 1-15].

As per claim 7, Flynn discloses a virtual private volume control method wherein servers on which a plurality of OSs run communicate with disk apparatus in such a

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manner that when one of said OSs on a server issues an access command, said server assign as an ID number for identifying the OS and sends the command with the assigned ID number attached thereto *{i.e., each request includes a PGID and a VMID}* [col. 8, lines 51-57]; said disk apparatus receives the sent command, derives said ID number *{i.e., the PGID/VMID is compared to a stored PGID/VMID}* [col. 8, lines 65-67], and returns a response that indicates whether to process or reject the access to a logical volume with said ID number attached thereto, depending on whether the logical number is accessible to the derived ID number; and said server receives said response *{i.e., if PGIDs/VMIDs are not the same, access is denied}* [col. 9, lines 1-15].

As per claim 12, Flynn discloses OS Management Software wherein when at least one of a plurality of OSs issues an access command, said software assigns an ID number for identifying the OS *{i.e., each request includes a PGID and a VMID}* [col. 8, lines 51-57]; stores the assigned ID number into internal memory of a server *{i.e., the PGID/VMID is compared to a stored PGID/VMID}* [col. 8, lines 65-67], receives a response to which said ID number is attached and returns the response to said OS *{i.e., if PGIDs/VMIDs are not the same, access is denied}* [col. 9, lines 1-15].

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5, 11, 13-19 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flynn, Jr. (US6,453,392) and Ault et al (US6,192,389).

As per claims 13, 19 and 24, Flynn discloses the claimed invention as detailed per claims 1, 7 and 12 above. However, although Flynn discloses the use of several IDs for processing or rejecting a request, Flynn does not specifically teach that ID numbers for identifying the application as well is attached as recited in the claims.

Ault discloses the use of ID numbers for identifying the application when processing a request [col. 7, lines 1-38].

As per claims 5, 11, 17 and 23, Flynn discloses the claimed invention as detailed per claims 1, 7 and 12 above. However, Flynn does not specifically teach that the system includes tables in which specification of whether to process or reject the access is retained as recited in the claims.

Ault discloses that the system includes tables in which specification of whether to process or reject the access is retained [col. 6, lines 18-22].

It would have been obvious to one of ordinary skill in the art, having the teachings of Flynn and Ault before him at the time the invention was made, to modify the system of Flynn to include the use of ID numbers for identifying the application when

processing a request and that the system includes tables in which specification of whether to process or reject the access is retained because it would have improved system performance by eliminating the need to connect to the client several times before the work can be started [col. 3, lines 6-9] as taught by Ault.

Claim 14 is rejected as per claim 2 above.

Claim 15 and 21 is rejected as per claim 3 above.

Claim 16 and 22 is rejected as per claim 4 above.

Claim 18 is rejected as per claim 6 above.

8. Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flynn, Jr. (US6,453,392) and Ault et al (US6,192,389) as applied to claims 7 and 19 above, and further in view of Firoozmand (US5,488,724).

As per claims 8 and 20, Flynn and Ault disclose the claimed invention as detailed above in the previous paragraphs. However, neither Flynn nor Ault discloses coding ID numbers in a data frame and sending the data frame as a command as recited in the claims.

Firoozmand discloses coding ID numbers in a data frame and sending the data frame as a command [see Abstract; col. 20, lines 8-13].

It would have been obvious to one of ordinary skill in the art, having the teachings of Flynn and Ault and Firoozmand before him at the time the invention was



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made, to modify the system of Flynn and Ault to include coding ID numbers in a data frame and sending the data frame as a command because it would have optimized storage of framed data by maintaining synchronization between frames of data and their corresponding headers as taught by Firoozmand.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111 (c) to consider these references fully when responding to this action. The documents cited therein teach processing or rejecting Operating System commands based on ID assigned to Operating System.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre M. Vital whose telephone number is (703) 306-5839. The examiner can normally be reached on Mon-Fri, 8:30 am - 6:00 pm, alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (703) 305-3821. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9000.

*PVV*

Pierre M. Vital  
March 23, 2003

*Reginald G. Bragdon*

REGINALD G. BRAGDON  
PRIMARY EXAMINER